

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (CURRENTLY AMENDED) An exercise machine, comprising:
 - a main frame;
 - a user support frame pivotally mounted relative to the main frame for rotation about a user support pivot axis, the user support pivot axis defining a vertical, gravitational center line, the user support frame comprising one moving part of the machine which moves between a start position and an end position during an exercise movement;
 - the user support frame having at least a primary support and a secondary support for supporting spaced positions on a user's body throughout an exercise movement, the primary support supporting the majority of a user's weight in the start position of the support frame, and the primary and secondary supports remaining in the same orientation relative to one another and traveling together throughout an exercise movement;
 - a user engagement device movably mounted on one of the frames for engagement by the user in performing exercises, the user engagement device comprising a second moving part of the machine;
 - a connecting link linking movement of the user engagement device to movement of the user support frame, the connecting link comprising a third moving part of the machine; and
 - a load for resisting movement of at least one of the moving parts of the machine;~~whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame between a start position and an end position,~~ the user support pivot axis being positioned such that portions of the combined weight of the user and user support frame are distributed on each side of the gravitational center line of the user support pivot axis in both the start and end position and only a portion of the combined weight passes through the gravitational center line during the exercise movement.

2. (ORIGINAL) The machine as claimed in claim 1, wherein the primary support comprises a seat pad.
3. (ORIGINAL) The machine as claimed in claim 2, wherein the secondary support comprises a back pad.
4. (WITHDRAWN) The machine as claimed in claim 2, wherein the secondary support comprises a chest pad.
5. (WITHDRAWN) The machine as claimed in claim 2, wherein the secondary support comprises thigh hold down pads.
6. (WITHDRAWN) The machine as claimed in claim 1, wherein the primary support comprises a back pad.
7. (WITHDRAWN) The machine as claimed in claim 6, wherein the secondary support comprises a head rest pad and shoulder rest pads.
8. (ORIGINAL) The machine as claimed in claim 1, including an additional user support for supporting a different part of the user's body from the primary support and secondary support.
9. (ORIGINAL) The machine as claimed in claim 8, wherein the additional user support is mounted on the user support frame.
10. (WITHDRAWN) The machine as claimed in claim 8, wherein the additional user support is mounted on the main frame.
11. (ORIGINAL) The machine as claimed in claim 8, wherein the additional user support comprises a foot support for the user's feet.

12. (WITHDRAWN) The machine as claimed in claim 8, wherein the additional user support is fixed in position relative to the first two supports throughout an exercise movement.
13. (WITHDRAWN) The machine as claimed in claim 8, wherein the additional user support comprises hand grips.
14. (PREVIOUSLY PRESENTED) The machine as claimed in claim 1, wherein the user support frame defines an initial position for the user's body when supported on the frame in the start position of the exercise, and a finish position for the user's body in the end position of the exercise, the gravitational center line extending through a central portion of the user's body in at least one of said initial and finish positions.
15. (PREVIOUSLY PRESENTED) The machine as claimed in claim 14, wherein the gravitational center line of the user support pivot axis extends through the user's hips in at least one of said user positions.
16. (WITHDRAWN) The machine as claimed in claim 14, wherein the gravitational center line of the user support pivot axis extends through the user's legs in at least one of said user positions.
17. (WITHDRAWN) The machine as claimed in claim 1, wherein the main frame has a floor-engaging portion and the user support frame is pivotally mounted on the floor-engaging portion for rotation about the user support pivot axis.
18. (CURRENTLY AMENDED) An exercise machine, comprising:
 - a main frame;
 - a user support frame pivotally mounted relative to the main frame for rotation about a user support pivot axis, the user support pivot axis defining a vertical, gravitational center line, the user support frame comprising one moving part of the machine;

the user support frame having at least a primary support and a secondary support for supporting spaced positions on a user's body throughout an exercise movement, the user support frame having a base member and an upright extending generally upwardly at an angle to the base member and which is fixed and not movable relative to the base member, the primary user support comprising a pad mounted on the base member;

a user engagement device movably mounted on one of the frames for engagement by the user in performing exercises, the user engagement device comprising a second moving part of the machine;

a connecting link linking movement of the user engagement device to movement of the user support frame, the connecting link comprising a third moving part of the machine; and

a load for resisting movement of at least one of the moving parts of the machine[[:]]

~~whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame between a start position and an end position.~~

19. (WITHDRAWN) The machine as claimed in claim 18, further comprising a user support pivot mount, the user support pivot mount comprising a four bar linkage between the user support frame and the main frame, the four bar linkage defining a theoretical pivot axis of the user support frame pivotal movement, the theoretical pivot axis comprising the user support pivot axis.

20. (WITHDRAWN) The machine as claimed in claim 18, wherein the user support pivot axis is located directly beneath the primary user support.

21. (PREVIOUSLY PRESENTED) The machine as claimed in claim 18, wherein the user support pivot axis is located approximately at a junction between the base member and upright of the user support frame.

22. (ORIGINAL) The machine as claimed in claim 1, wherein the user engagement device is movably mounted on the main frame.

23. (WITHDRAWN) The machine as claimed in claim 1, wherein the user engagement device is movably mounted on the user support frame.
24. (ORIGINAL) The machine as claimed in claim 1, wherein the user engagement device comprises at least one rigid exercise arm.
25. (WITHDRAWN) The machine as claimed in claim 1, wherein the user engagement device comprises at least one flexible member.
26. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link is a rigid link.
27. (ORIGINAL) The machine as claimed in claim 26, wherein the connecting link has a first end pivoted to said user engagement device and a second end pivoted to said user support frame.
28. (WITHDRAWN) The machine as claimed in claim 1, wherein the connecting link is a flexible member.
29. (WITHDRAWN) The machine as claimed in claim 1, wherein said connecting link is adjustable in length.
30. (WITHDRAWN) The machine as claimed in claim 1, including a slide member slidably mounted on said user support frame, the connecting link having a first end pivoted to said slide member.
31. (WITHDRAWN) The machine as claimed in claim 1, wherein the connecting link has a first end pivoted to said user engagement device and a second end pivoted to said main frame, the user support frame being pivotally connected to said user engagement device, whereby movement of said user engagement device is linked to movement of the user support frame.

32. (WITHDRAWN) The machine as claimed in claim 1, wherein the connecting link comprises a first gear toothed cam mounted on said user engagement device and a second gear toothed cam mounted on said user support frame and meshing with said first gear toothed cam.
33. (WITHDRAWN) The machine as claimed in claim 1, wherein the connecting link comprises a cable and pulley assembly extending between said user engagement device and said user support frame.
34. (WITHDRAWN) The machine as claimed in claim 1, wherein the connecting link comprises a moving wedge member slidably engaged with said main frame and user support frame, and said user engagement device is mounted on said moving wedge member.
35. (ORIGINAL) The machine as claimed in claim 1, wherein the user engagement device is adjustable.
36. (PREVIOUSLY PRESENTED) An exercise machine, comprising:
a main frame;
a user support frame pivotally mounted relative to the main frame for rotation about a user support pivot axis, the user support pivot axis defining a vertical, gravitational center line of the pivotal movement, the user support frame comprising one moving part of the machine;
an exercise arm assembly movably mounted on one of the frames for engagement by the user in performing exercises, the exercise arm assembly having at least one user engaging portion which engages one body part comprising a user's hands or feet, and comprising a second moving part of the machine;
a connecting link movably engaged with at least two of the main frame, user support frame and exercise arm assembly for linking movement of the exercise arm assembly to movement of the user support frame, the connecting link comprising a third moving part of the machine;
movement of the entire user support frame in an exercise movement being controlled by actuation of the exercise arm assembly by said one body part; and

a load for resisting movement of at least one of the moving parts of the machine, whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame, the user support pivot axis being positioned at a predetermined location beneath at least a substantial portion of the user's body when supported on the frame, such that portions of the combined weight of the user and user support frame are distributed on each side of the gravitational center line of the pivot axis throughout the entire exercise movement, only a portion of the combined weight passing through the gravitational center line during the exercise movement.

37. (PREVIOUSLY PRESENTED) An exercise machine, comprising:

a main frame having a floor-engaging portion ;

a user support frame pivotally mounted relative to the main frame for rotation about a user support pivot axis at a location spaced above the floor-engaging portion, the support frame being designed for supporting the body of a user in a predetermined exercise position, the pivot axis defining a vertical, gravitational center line of the pivotal movement, the user support frame comprising one moving part of the machine;

the user support frame having at least a primary user support and a secondary user support for supporting different parts of a user's body during an exercise, the primary and secondary user support together supporting the majority of the user's body weight during the exercise and traveling together such that the secondary user support remains at the same angular orientation relative to the primary user support throughout the exercise movement;

an exercise arm movably mounted on one of the frames for engagement by the user in performing exercises, the exercise arm having at least one user engaging portion, and comprising a second moving part of the machine;

a connecting link linking movement of the exercise arm to movement of the primary and secondary user support, the connecting link comprising a third moving part of the machine;

a load for resisting movement of at least one of the moving parts of the machine, whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame and user between a start position and an end position;

the user support pivot axis being located under at least a substantial portion of the user's body when supported on the frame during at least part of an exercise movement.

38. (PREVIOUSLY PRESENTED) The machine as claimed in claim 37, including an additional user support mounted on the user support frame and moving with the user support frame.
39. (ORIGINAL) The machine as claimed in claim 37, wherein the additional user support comprises at least one foot support plate.
40. (PREVIOUSLY PRESENTED) The machine as claimed in claim 37, wherein the gravitational center line passes through a central portion of the user's body in at least one of the start and end positions.
41. (PREVIOUSLY PRESENTED) The machine as claimed in claim 40, wherein the gravitational center line passes through the user's hips in at least one of the start and end positions.
42. (WITHDRAWN) The machine as claimed in claim 40, wherein the gravitational center line passes through the user's legs in at least one of the start and end positions.
43. (WITHDRAWN) The machine as claimed in claim 37, wherein the connecting link is a rigid member.
44. (WITHDRAWN) The machine as claimed in claim 37, wherein the connecting link is a flexible member.
45. (WITHDRAWN) The machine as claimed in claim 37, wherein the connecting link is adjustable in length.
46. (WITHDRAWN) The machine as claimed in claim 37, wherein the exercise arm comprises at least one rigid member.

47. (WITHDRAWN) The machine as claimed in claim 46, wherein the exercise arm comprises a pair of articulating arm members mounted on opposite sides of the user support frame.
48. (WITHDRAWN) The machine as claimed in claim 37, wherein the exercise arm comprises at least one flexible member.
49. (ORIGINAL) The machine as claimed in claim 37, wherein the exercise arm is adjustable.
50. (PREVIOUSLY PRESENTED) An exercise machine, comprising:
a main frame having a floor-engaging portion;
a user support frame pivotally mounted on the main frame for rotation about a user support pivot axis at a location spaced above the floor-engaging portion, the support frame being designed for supporting the body of a user in a predetermined exercise position, the pivot axis defining a vertical, gravitational center line of the pivotal movement, the user support frame comprising one moving part of the machine;
the user support frame having at least a primary user support and a secondary user support for supporting different parts of a user's body during an exercise;
an exercise arm movable relative to at least one of the frames and movably mounted on said at least one of the frames for engagement by the user in performing exercises, the exercise arm having at least one user engaging portion, and comprising a second moving part of the machine;
a connecting link linking movement of the exercise arm to movement of the entire user support frame, the connecting link comprising a third moving part of the machine;
a load for resisting movement of at least one of the moving parts of the machine, whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame and user between a start position and an end position; and
the user support pivot axis being positioned such that portions of the combined weight of the user and user support frame are distributed on each side of the gravitational center line of the user support pivot axis in both the start and end position and a portion of the combined weight passes through the gravitational center line during the exercise movement.

51. (PREVIOUSLY PRESENTED) An exercise machine, comprising:

a main frame;

a user support frame pivotally mounted relative to the main frame for rotation about a user support pivot axis, the user support pivot axis defining a vertical, gravitational center line, the user support frame comprising one moving part of the machine;

the user support frame having at least a primary support and a secondary support for supporting spaced positions on a user's body throughout an exercise movement, the primary support comprising a seat pad and the secondary support comprises a leg support which travels in the same direction as the primary support throughout an exercise movement;

a user engagement device movably mounted on one of the frames for engagement by the user in performing exercises, the user engagement device comprising a second moving part of the machine;

a connecting link linking movement of the user engagement device to movement of the user support frame, the connecting link comprising a third moving part of the machine; and

a load for resisting movement of at least one of the moving parts of the machine;

whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame between a start position and an end position, the user support pivot axis being positioned such that portions of the combined weight of the user and user support frame are distributed on each side of the gravitational center line of the user support pivot axis in both the start and end position and only a portion of the combined weight passes through the gravitational center line during the exercise movement.

52. (PREVIOUSLY PRESENTED) The machine as claimed in claim 51, wherein the secondary support is a foot rest.

53. (PREVIOUSLY PRESENTED) The machine as claimed in claim 1, wherein the primary and secondary supports are adapted to support spaced positions on the user's body in the same relative positions throughout an exercise movement.

54. (WITHDRAWN) The machine as claimed in claim 14, wherein the gravitational center line of the user support pivot axis extends through the user's thighs in at least one of said user positions.
55. (PREVIOUSLY PRESENTED) The machine as claimed in claim 1, wherein the user support pivot axis is located directly behind the primary user support.
56. (PREVIOUSLY PRESENTED) The machine as claimed in claim 18, wherein the user support pivot axis is located on the upright of the user support frame.
57. (PREVIOUSLY PRESENTED) The machine as claimed in claim 37, wherein the user supports are fixed relative to one another during an exercise movement.
58. (PREVIOUSLY PRESENTED) The machine as claimed in claim 38, wherein the additional user support is fixed relative to the user support frame during an exercise movement so as to move with the user support frame in the same orientation relative to the frame.
59. (PREVIOUSLY PRESENTED) The machine as claimed in claim 50, wherein the secondary user support comprises a leg support.
60. (PREVIOUSLY PRESENTED) The machine as claimed in claim 36, wherein said at least one user engaging portion comprises two user engaging portions which engage the user's hands or the user's feet, whereby movement of the user support frame is selectively controlled by actuation of one or both user engaging portions.